Northwest RiverPartners
For salmon, our economy and quality of life

The Hydro System: Vital to Our Quality of Life

The dams on the Columbia and Snake rivers provide clean, renewable, and climate-friendly electricity for the Northwest. They add to our enviable quality of life in many ways. Dams control flooding, provide irrigation for farmland, add millions of dollars to the economy through navigation and commercial transportation, and create recreational opportunities for residents and tourists.

Hydropower

Hydropower provides over 60 percent of the electricity generating capacity in the Northwest. In a normal precipitation year, dams produce about three-quarters of the region's electricity. Because of clean renewable power, the Northwest's "carbon footprint" is half that of other parts of the country.

- Hydropower produces no emissions. The fuel is water, which travels from dam to dam and is used repeatedly to generate electricity.
- Hydropower is renewable; water is continually replenished through rain and snowmelt.
- Hydropower plants typically cost three to ten times less (per megawatt-hour) to generate electricity in the Northwest than nuclear, coal, and natural gas plants.
- Hydropower is more efficient than any other form of electricity generation. It is capable of converting 90 percent of the available energy into electricity. The best fossil-fuel plant is only about 50 percent efficient; and wind power, at its best, is 33 percent efficient.
- Hydropower responds quickly to shifts in power needs. Generation can be ramped up and down almost instantaneously at a dam. This makes it an ideal backup companion to wind turbines.

Flood Control

Controlling flood waters in the Columbia River became a priority in 1948, when Vanport, Oregon was destroyed in a late spring flood. The Army Corps of Engineers responded to the devastation by developing a multi-use reservoir storage plan for the Columbia River Basin.

- A 1964 treaty with Canada led to the development of millions of acre-feet of water storage for flood control. Reservoir storage is used to prevent floods in the Columbia River Basin.
- Prior to the development of dams on the Columbia and Willamette rivers, Portland, Oregon was subject to severe flooding. In February 1996, when floods threatened the city, dam operations kept the river level a foot to a foot and a-half lower than it would have been otherwise.

Irrigation

Farmers in arid parts of the Northwest depend on irrigation to support crops such as wheat, corn, potatoes, peas, alfalfa, apples, and grapes.

- Six percent of the Columbia River Basin's yearly runoff is diverted to irrigate about 7.8 million acres of Northwest farmland.

- Idaho has the most irrigated acreage in the Northwest with over 3 million acres; Washington and Oregon have a combined 3.5 million acres of irrigated farmland.

Commerce

The Columbia and Snake rivers provide the 465-mile water "highway" for moving 50 million tons of commercial cargo annually, which is worth nearly $19 billion. Eight locks provide the route past dams on the mainstem of the Columbia and Snake rivers.

- River navigation is the cleanest, most fuel-efficient mode of commodity transportation.

- A 110-mile, 40-foot-deep channel from the Pacific Ocean to Portland and Vancouver, Washington provides a waterway for deep-draft, ocean-going ships moving 40 million tons of international trade.

- A 365-mile inland waterway from Portland/Vancouver to Lewiston, Idaho moves 10 million tons of commercial cargo every year.

- The Columbia River is the #1 wheat export gateway, #1 barley export gateway, and #1 West Coast paper and paper-product export gateway.

- Tourism from river cruise ships brings $15 million to $20 million annually to local economies.

Recreation

Dams make possible a variety of recreational activities along the Columbia and Snake rivers.

- Opportunities for fishing, swimming, waterskiing, camping, picnicking, hiking, rafting, boating, windsurfing, and sight-seeing abound at sites developed near the dams.

- More than 450,000 tourists drop in at the visitors' center at Grand Coulee Dam each year.

- Fish ladder viewing windows at Bonneville Dam allow visitors to see migrating fish.

- Fish hatcheries, funded by those who own and operate dams, provide salmon, steelhead, and other species to be caught in sport fisheries.

- Parks, trails, and viewing areas at the dams create opportunities for people to see the region's fish and wildlife in their native habitats.

Northwest RiverPartners is a partnership of farmers, electric utilities, ports, and large and small businesses in the Pacific Northwest. We are dedicated to ensuring the Columbia and Snake remain living, working rivers to benefit families and businesses in the region.

www.nwriverpartners.org
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